

# Memorandum

**Date:** December 6, 2002  
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Arthur H. Rosenfeld, Associate Member

**From:** California Energy Commission  
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**Subject:** PICO POWER PROJECT ISSUE IDENTIFICATION REPORT

Attached is the staff's Issue Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff believe will require careful attention and consideration. Energy Commission staff will present the Issues Report at a scheduled Information Hearing on December 16, 2002, at approximately 3:30 p.m. in the Saratoga Ballroom, Salon 3, at the Biltmore Hotel, 2151 Laurelwood Road (corner of Hwy 101 & the Montague Expressway), in Santa Clara, California.

In the attached Issues Report, Staff has identified potential issues in two areas: air quality and biological resources. In addition, part of this report deals with scheduling issues. The Energy Commission is reviewing the Pico Power Project pursuant to a 6-month Application for Certification (AFC) review process.

## Attachments

cc: Proof of Service List  
San Francisco Bay RWQCB  
Bay Area Air Quality Management District  
USFWS  
CDFG

# **ISSUE IDENTIFICATION REPORT**

## **PICO POWER PROJECT**

(02-AFC-3)

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# **PICO POWER PROJECT ISSUE IDENTIFICATION REPORT**

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. Issues are identified as a result of discussions with federal, state, and local agencies, and our review of the Pico Power Project Application for Certification (AFC), Docket Number 02-AFC-3. This Issue Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address the status of potential issues and progress towards their resolution in periodic status reports to the Committee.

## **PROJECT DESCRIPTION**

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On October 7, 2002, the City of Santa Clara's electric department, doing business as Silicon Valley Power (City of Santa Clara, or Applicant), filed an Application for Certification (AFC) seeking approval from the California Energy Commission to construct and operate the Pico Power Project (PPP), a natural gas-fired combustion turbine electric generating facility on an 3-acre site within the City of Santa Clara in Santa Clara County, California. The new combined-cycle facility is expected to generate 122 megawatts (MW) under nominal conditions, with the ability to peak fire up to 147 MW. The Applicant filed a supplement to its AFC on November 15, 2002, and the Commission ruled on November 20, 2002, that the AFC was data adequate, allowing Commission staff to begin their review of the AFC under the Commission's 6-month expedited AFC review process.

The generating facility would consist of two General Electric LM-6000PC Sprint combustion turbine-generators (CTGs), a single condensing steam turbine generator (STG), a deaerating surface condenser, a mechanical draft plume-abated cooling tower; and associated support equipment. The CTGs would be equipped with standard combustors, air inlet chilling, and heat recovery steam generators (HRSGs) with duct burners. The emission control system includes a selective catalytic reduction (SCR) unit and water injection to control nitrogen oxides (NO<sub>x</sub>) and an oxidation catalyst to control carbon monoxide (CO).

An existing pipeline currently located within the boundaries of the PPP site would supply tertiary treated recycled waste water from the San Jose/Santa Clara Water Pollution Control Plant (WPCP), located in the City of Alviso, to provide cooling water for the plant. A 115-kilovolt (kV) on-site switchyard would deliver the plant's power directly to the adjacent Kifer Receiving Station and the nearby Scott Receiving Station, located approximately 0.25 miles west of the site. The project includes approximately 2.0 miles of new 12-inch diameter underground natural gas pipeline to convey gas from Pacific Gas & Electric Company's (PG&E) gas distribution Line 132 to a gas compressor facility located on City of Santa Clara property adjacent to the PPP site. Approximately 900 feet of 18-inch diameter underground pipeline will be needed to convey the project's wastewater discharge from the PPP site south in Lafayette Avenue to a 27-inch waste water main in Central Expressway. The City of Santa Clara would provide domestic water for drinking, showers, sinks and general sanitary purposes from its municipal system.

## POTENTIAL MAJOR ISSUES

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This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. This report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report was based on our judgement of whether any of the following circumstances would occur:

- The project may directly or indirectly cause significant impacts that may be difficult to mitigate;
- The project as proposed may not comply with applicable laws, ordinances, regulations or standards (LORS);
- Conflicts may arise between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay to the schedule.

The following table lists all the subject areas evaluated and notes those areas where significant issues have been identified and if data requests have been requested. Even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area. For example, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops or even subsequent hearings. However, we do not currently believe such an issue will have an impact on the case schedule or that resolution will be difficult.

| Major Issue | Data Req. | Subject Area           | Major Issue | Data Req. | Subject Area             |
|-------------|-----------|------------------------|-------------|-----------|--------------------------|
| Yes         | Yes       | Air Quality            | No          | No        | Public Health            |
| Yes         | Yes       | Biological Resources   | No          | No        | Socioeconomics/EJ        |
| No          | Yes       | Cultural Resources     | No          | Yes       | Traffic & Transportation |
| No          | No        | Reliability/Efficiency | No          | No        | Transmission Safety      |
| No          | No        | Facility Design        | No          | No        | Transmission Sys. Eng.   |
| No          | Yes       | Geological Resources   | No          | Yes       | Visual                   |
| No          | No        | Hazardous Material     | No          | No        | Waste Management         |
| No          | Yes       | Land Use               | No          | Yes       | Water & Soil             |
| No          | No        | Noise                  | No          | No        | Worker safety            |

## AIR QUALITY

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The setting of emission limits for the Pico Power Project, based on the Best Available Control Technology (BACT) standards, may be an issue for this proceeding. The applicant proposes a BACT level of 2.5 ppm for NO<sub>x</sub> (Oxides of Nitrogen) and 4.0 for CO (Carbon Monoxide). Recent experience indicates that the NO<sub>x</sub> BACT may be determined to be 2.0 ppm averaged over 1 hour and the CO BACT may be determined to be 2.0 ppm averaged over 3 hours. The U.S. Environmental Protection Agency (EPA) has made comments to this effect on many previous power plant siting cases before the Commission. For an example of these comments, please see the letter to Mr. Seyed Sadredin of the San Joaquin Valley Unified APCD dated May 6, 2002, titled "U.S. EPA Comments on the

Preliminary Determination of Compliance for San Joaquin Valley Energy Center,” and also the letter to Mr. David W. Dixon of the San Luis Obispo APCD dated June 19, 2001, titled “Re: Preliminary Determination of Compliance for Duke Energy Morro Bay LLC, CEC Docket Number 00-AFC-12.”

Staff has submitted two data requests to the applicant requesting a district specified BACT analysis of NO<sub>x</sub> and CO. However, if the applicant chooses to maintain that BACT should be set at the higher emissions level originally proposed in the AFC, EPA may comment on the issue. This could delay the issuance of the BAAQMD’s Final Determination of Compliance, in which case additional time may be required for resolution before detailed assessment of project impacts and mitigation would go forth.

## **BIOLOGICAL RESOURCES**

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The analysis of potential impacts to the Bay checkerspot butterfly caused by the deposition of nitrogen compounds on serpentine soils, and the determination of appropriate mitigation for any identified impact, presents one of the more challenging technical tasks during the analysis of the Pico Power Project AFC. This task is made more complicated by the fact that Commission Staff and the Applicant may disagree on the appropriate air quality modeling program that would be used to assess impacts. Staff is concerned that a lengthy interagency/applicant debate over the most appropriate model for assessing the proposed project’s potential nitrogen deposition impacts could significantly affect the 6-month expedited process. The applicant has indicated their intention to use the results of a CALPUFF modeling analysis to assess the potential impacts to Bay checkerspot butterfly habitat. The CALPUFF model has not been used in Energy Commission cases to analyze nitrogen deposition impacts, and Staff is concerned that the proposed project’s potential nitrogen deposition impacts to Bay checkerspot butterfly habitat would be underestimated if the analysis relies on CALPUFF modeling results.

In several prior siting cases (Metcalf, Los Esteros, Otay Mesa), the Industrial Source Complex Short Term Version 3 (ISCST3) model was used in analyzing nitrogen deposition impacts. In each case, following a series of meetings, workshops, and agency consultations, Commission Staff determined that the ISCST3 model was the most appropriate model for use in assessing the potential impacts from each project. The decision to use ISCST3 was made (in each case) even though another model (CALPUFF) was proposed. ISCST3 was also used by the USFWS to assess potential impacts for the Coyote Valley Research Park. Staff expects the issue of the most appropriate model for use in the nitrogen deposition impact analysis will be a major subject of discussion during workshops for the project, and perhaps during hearings as well.

## **SCHEDULING ISSUES**

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Staff has begun its analyses of the project and is currently in the discovery phase, as well as its assessment of other environmental and engineering aspects of the applicant’s proposal.

Following is staff’s proposed 6-month schedule for key events of the project. The ability of staff to be expeditious in meeting this schedule will depend on the applicant’s timely response to: staff’s data requests, resolution of the BACT issue and filing of Determination of Compliance from the air district, resolution of Bay checkerspot butterfly impact

assessment methodology and proposed mitigation related to nitrogen deposition from the project, and other factors not yet discovered.

**Energy Commission Staff's Proposed Schedule  
For the Pico Power Project**

|                |                            |   |
|----------------|----------------------------|---|
| (2002) Day -38 | October 7<br>(Monday)      | Application filed   |
| Day -6         | November 14<br>(Thursday)  | Staff recommendation on<br>DA   |
| Day 0          | November 20<br>(Wednesday) | CEC determines Data<br>Adequacy   |
| Day 16         | December 5<br>(Thursday)   | Staff files Data Requests   |
| Day 17         | December 6<br>(Monday)     | Staff files Issue<br>Identification Report  |
| Day 26         | December 16<br>(Monday)    | Data Request Workshop,<br>Info Hearing & Site Visit   |
| Day 34         | December 23<br>(Monday)    | Applicant files data<br>responses   |
| (2003) Day 50  | January 9<br>(Thursday)    | Workshop on Issues, &<br>Data Responses   |
| Day 62         | January 21<br>(Tuesday)    | Local, state agencies file<br>Prelim Determinations   |
| Day 75         | February 3<br>(Monday)     | Staff Assessment  |
| Day 85         | February 13<br>(Thursday)  | Staff Assessment<br>workshop  |
| Day 100        | February 28<br>(Friday)    | Local, state, federal, file<br>Final Determinations.  |
| Day 100        | February 28                | Pre-hearing conference,<br>order setting dates for<br>Applicant and Intervenor<br>testimony |
| Day 120        | March 20<br>(Thursday)     | Staff Assessment<br>Addendum  |
| Day 126        | March 26<br>(Wednesday)    | Applicant and Intervenors<br>file testimony   |
| Day 131        | March 31<br>(Monday)       | Evidentiary Hearing   |
| Day 149        | April 18<br>(Friday)       | PMPD  |
| Day 160        | April 29<br>(Tuesday)      | Close of comment period<br>on PMPD  |
| Day 176        | May 14<br>(Wednesday)      | Decision  |